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How much further can the pendulum swing?

IN THE past few years the tide of inflation has run so steadily in Britain, and the economy has been so sluggish, that we have rather lost sight of former landmarks and tended to measure performance mainly on the outcome of individual battles and on our ability to survive from year to year. Viewed in a longer time perspective, however, how has science fared in these years? In the Third Leverhulme Lecture in Liverpool last week, the biochemist Hans Kornberg pulled together a number of scattered statistics to show that although we may have survived the battles in some way or another, we are still in danger of losing the war. These matters are of particular interest now that North Sea oil is bringing some relief to a beleaguered economy and everyone who has been asked to make sacrifices is wondering when the sacrificing is going to stop.

Most striking of Kornberg's examples is the way in which expenditure on civil research and development in five European countries moved in the years 1969-74. West Germany, France and the United Kingdom spent respectively 1.5, 1.2 and 0.9 billion (10⁹) Eurodollars in 1969; by 1974 Germany was up to 3.6 billion, France to 2.0 billion . . . and the UK almost static at 1.0 billion. Expenditures in the Netherlands and Belgium, previously down at the 0.2-0.3 billion level, are steadily rising.

The figures do, of course, need extensive qualification. No one who has travelled on the Continent will be unaware of the discrepancies in cost of living which exchange rates seem poorly to reflect. And there are complications between countries in the allowance that is made for social security payments. So a better measure might well be how many people are employed in research and development per thousand of population in each country. But the general shape of the conclusion would be the same: that in Europe, Britain is lagging very seriously in its investment in civil R&D, though still spending heavily in the defence field in its urge to keep in touch with the United States.

Even within the term 'civil R&D', however, there needs to be some attention to detail. In recent years

the Rothschild reorganisation of government R&D and the more recent enthusiasm for engineering has ensured a moderate degree of health for the applied side of things. But with a static total budget this has inevitably meant harder times for the more basic side. In many ways the approach to these harder times has been too subtle to cause individual comment. One such way is the upwards creep of costs, necessary just to stand still. As staff become more senior, they are entitled to higher wages; as research proceeds, more complicated equipment is generally needed. Such costs outstrip cost-of-living scales normally used to adjust authorisations from year to year. As Kornberg puts it, "The pendulum has now swung too far [from the more affluent days of the 1960s] and its action must be reversed if it is not to cause possibly irreversible damage".

Few scientists would need to be reminded of one perfectly valid argument for supporting basic research—that you can never tell what it will turn up, and the occasional discovery, be it Newton's Laws or Mendel's peas or whatever, is infinitely more valuable in the long run than any amount of basic research. But there are two more arguments which should be deployed more frequently. They are, first, that support of basic research is support of a cultural activity, which government ought to have a genuine pride in fostering; and, second, that basic research and indeed basic researchers recognise no national frontiers, and so if support wanes in one country whilst waxing elsewhere British researchers will first have to depend more and more on the kindness of their foreign colleagues and ultimately will move themselves, or recommend their students to move to more fertile pastures.

The erosion is slow and there is no psychologically 'right' time at which to start protesting; besides, scientists recognise as well as anyone that there have been some genuine national needs for economy. But maybe Kornberg's speech, together with the Secretary of State for Education and Science's call a few months ago for a science lobby, will start something. □